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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Anton Frank

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09/11/2009

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EXAMINER

LESLIE, MICHAEL S

ART UNIT

PAPER NUMBER

3745

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,184	<b>Applicant(s)</b> FRANK ET AL.	
	<b>Examiner</b> MICHAEL LESLIE	<b>Art Unit</b> 3745	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/23/2006</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the hydrodynamic turbomachine having a cavity (Claims 10, 19, & 27) and a closure body having an axial projection, a bushing and three step-shaped expansions (Claims 16, 17, & 20) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

Claims 10, 25, and 27 are objected to because of the following informalities: Claim 10, Line 17, "has" should be --is disposed--; Claim 25, Line 2, "that" should be deleted; Claim 27, Line 7, --the-- should be inserted before "closure". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16, 17, 20, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 is rejected for being directed toward an embodiment that conflicts with that of parent claim 10. Claim 16 recites "an axial projection", which is directed toward the embodiment of Fig. 3 while parent claim 10 is directed toward the embodiment of Fig. 2, which requires the bushing.

Claim 17 is rejected for being directed toward an embodiment that conflicts with that of parent claim 10. Claim 17 recites "an axial projection", which is directed toward the embodiment of Fig. 3 while parent claim 10 is directed toward the embodiment of Fig. 2, which requires the bushing.

Claim 20 is rejected for being directed toward an embodiment that conflicts with that of parent claim 19. Claim 20 recites a "bushing", which is directed toward the embodiment of Fig.

Art Unit: 3745

2 while parent claim 19 is directed toward the embodiment of Fig. 3, which requires the axial projection.

Claim 20 recites the limitation "the bushing" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 28 recites the limitation "the bushing" in line 4. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-15, 18 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker (3436916) in view of Eon et al (5251441).

Becker discloses a closure for a hydrodynamic turbomachine having a cavity, the closure including a closure body (44, 46) for sealing the cavity that is to be closed, a fusible safeguard element (42) inserted into the closure body for closing a through-opening in the closure body, the closure body having a bushing (43) with a continuous bore and the bushing being inserted into the through-opening of closure body at an axial end, the continuous bore and the region of the through-opening that is axially adjacent to the bushing being aligned flush with each other, wherein the fusible safeguard element completely fills the continuous bore of the bushing over an entire cross section thereof along a pre-determined axial length, wherein the fusible safeguard

Art Unit: 3745

element is a fusible solder that is soldered in the continuous bore of the bushing, wherein the bushing is disposed at an axial end in which the fusible solder is positioned, wherein the bushing has a step-shaped expansion (Fig. 2) of the cross section so that a portion of the fusible solder comes to rest on the bushing in the axial direction so that an axial thrust force can be transmitted from the fusible solder onto the bushing, wherein the step-shaped expansion is designed in that the axial end facing the interior of the cavity when the closure is inserted into a wall bounding the cavity. Wherein the closure body is provided with three step-shaped expansions in the region accommodating the bushing and wherein the bushing has a shoulder in the radial direction so that a cavity is created between the bushing and the closure body, and the closure seals a working chamber of a hydrodynamic coupling, a hydrodynamic brake or a hydrodynamic converter. Becker does not explicitly teach that the fusible solder projects axially beyond the step-shaped expansion.

Eon et al disclose a closure (Figs. 1 & 3) for a hydrodynamic turbomachine (10) having a cavity (15), wherein the closure includes a closure body having a step-shaped expansion and a fusible solder that includes a portion that contacts the step-shaped expansion so that an axial thrust force is transmitted from the solder to the body and the fusible solder includes a further portion that projects axially beyond the step-shaped expansion.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the closure of Becker to have the fusible solder project axially beyond the step-shaped expansion as taught by Eon et al for the purpose of improving sealing.

In further regard to claims 12-15 and 29, since applicant has not disclosed that having the claimed dimensions solves any stated problem or is for any particular purpose above the fact that

Art Unit: 3745

such dimensions fit a particular scaled application and it appears that the closure of Becker, as modified, would perform equally well with the dimensions as claimed by applicant, it would have been an obvious matter of design choice to modify the closure of Becker, as modified, by utilizing the dimensions as claimed for the purpose of fitting the desired application.

Claims 19 and 21-26 rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (2216351) in view of Eon et al (5251441).

Miller discloses a hydrodynamic turbomachine having a cavity and a closure, wherein the closure includes a closure body (1) for sealing the cavity that is to be closed, a fusible safeguard element (8) inserted into the closure body, and keeps at least indirectly closed a through-opening formed in closure body, the closure body having a first axial end and a second opposite axial end, wherein the through-opening extends in the axial direction from the first axial end to the second opposite axial end and is closed in the region of the second opposite axial end by the fusible safeguard element, the closure body having a substantially cylindrical axial prolongation (section beyond threads 5) in a region of the second opposite axial end, which has a wall thickness that is reduced relative to the wall thickness of remaining closure body and which forms an axial section of the surrounding outer wall of the through-opening, wherein the fusible safeguard element is enclosed over at least half of its axial length by the axial prolongation in the circumferential direction, wherein the fusible safeguard element is a fusible solder that is soldered in the through-opening in the closure body, the through-opening being formed at its axial end, in which the fusible solder is arranged, with a flared expansion portion (7), so that a portion of the fusible solder comes to rest against the closure body in the axial direction in such a

Art Unit: 3745

way that an axial thrust force can be transmitted from the fusible solder onto the closure body, wherein flared expansion is designed in that axial end which faces the interior of the cavity when the closure is inserted into a wall bounding a cavity and the fusible solder projects axially beyond the flared expansion. Miller does not explicitly teach that the second end of the closure includes a step-shaped expansion of the cross section.

Eon et al disclose a closure (Figs. 1 & 3) for a hydrodynamic turbomachine (10) having a cavity (15), wherein the closure includes a closure body having a step-shaped expansion and a fusible solder that includes a portion that contacts the step-shaped expansion so that an axial thrust force is transmitted from the solder to the body and the fusible solder includes a further portion that projects axially beyond the step-shaped expansion.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the closure body of Miller to have a step-shaped expansion of the cross section as taught by Eon et al for the purpose of improving sealing and allowing a great force distribution via the shoulder.

In further regard to claims 21-26, since applicant has not disclosed that having the claimed dimensions solves any stated problem or is for any particular purpose above the fact that such dimensions fit a particular scaled application and it appears that the closure of Becker, as modified, would perform equally well with the dimensions as claimed by applicant, it would have been an obvious matter of design choice to modify the closure of Becker, as modified, by utilizing the dimensions as claimed for the purpose of fitting the desired application.



***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 5561975, 4581892, and 3377957 each disclose a hydrodynamic turbomachine having a cavity and a closure including a fusible safeguard.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LESLIE whose telephone number is (571)272-4819. The examiner can normally be reached on M-F 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ML  
September 9, 2009

/Michael Leslie/  
Primary Examiner, Art Unit 3745